ABSTRACT

Provided herein are addressable collections of anti-tag capture agents, such as antibodies, that are used as tools for sorting proteins containing polypeptide tags for which the capture agents are specific.

5 Also provided are methods of nested sorting using the collections. The methods includes the steps of creating tagged collections of molecules by introducing a set of nucleic acid molecules that encode unique preselected polypeptides to create a library of tagged molecules; either before or after introducing the tags, dividing the library into N divisions;

10 translating each division and reacting each with one of N capture agent collections, identifying the capture agents bound to the polypeptide tags linked to molecules of interest, and thereby identifying the one of the divided collections that contains the molecules of interest. The method can further include adding a new set of tags and repeating the sorting

15 process with the same or a different collection capture agents and thereby identifying a protein or molecule of interest.